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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/092,683	03/06/2002	Man Hon Cheng	SC11850HP	3796

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MOTOROLA, INC.  
CORPORATE LAW DEPARTMENT - #56-238  
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PHOENIX, AZ 85018

EXAMINER

MITCHELL, JAMES M

ART UNIT PAPER NUMBER

2827

DATE MAILED: 02/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

10/092,683

Applicant(s)

CHENG ET AL.

Examiner

James Mitchell

Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 November 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-5 and 8-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5 and 8-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-5 and 8-17 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 1 and 12 recites the limitation "the inner row of terminals" and "the outer row of terminals." Claim 9 recites "the other side." There is insufficient antecedent basis for this limitation in the claim.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 4-8 and 12-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Goto (JP 05-36886).

Goto (Fig 1, 2, 7) discloses a leadframe for a semiconductor device, the leadframe comprising: a generally square shaped paddle ring (4) having an inner an outer perimeter and a cavity (defined by ring) located within the inner perimeter for receiving an circuit die (1) that is placed within the cavity and includes a plurality of die pads (1b), a first row of terminals (6) individually connected (Fig 3 shown 3b connected

to 7) to a connection bar (8) and generally surrounding the paddle ring outer perimeter and a second row of terminals (7) surrounding the first row of terminals wherein each of the terminals of the second row of terminals connected to said connection bar and wherein the first row of terminal (understood to be the inner row of terminals) is connected to the second row of terminals (understood to be the outer row of terminals) at a corner of the connection bar; a paddle flag (3) located within the cavity that supports the die wherein the flag is inherently integral with the ring via adhesive (2); and each of the terminals of the first row is individually connected to the paddle ring; with each terminal of the second row terminals connected to one side of the connection bar; said die and die pads electrically connected to respective ones of the first and second rows of terminals.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto as applied to claim 1 and further in combination with Osada (JP402278845).

Goto doesn't appear to disclose that the outer perimeter of the paddle ring include a plurality of projections.

However, Osada utilizes a paddle ring that includes a plurality of projections to the outer perimeter of said paddle.

It would have been obvious to one of ordinary skill in the art to incorporate projections to the paddle of Goto in order to prevent resin from being leaked as taught by Osada (Abstract).

Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Goto as applied to claim 8.

Although Goto does not appear to disclose another row of terminals connected to a side of the ring, it would have been obvious to one of ordinary skill in the art at the time the invention was made to form another row of terminals connected to said ring for connecting to a second semiconductor integrated circuit die, since it has been held that mere duplication of essential working parts of a device involves only routine skill in the art. *St Regis Paper Co. v. Bemis Co.*, 193 USPQ 8 (CA7 1977).

Lastly, although the prior art does not appear to explicitly teach leads "for connecting to a second integrated die", this statement of intended use does not result in a structural difference between the claimed apparatus and the apparatus of the prior art.

Further, because the apparatus of the prior art is inherently capable of being used for the intended use the statement of intended use does not patentably distinguish the claimed apparatus from the apparatus of prior art. Similarly, the manner in which an apparatus operates is not germane to the issue of patentability of the apparatus; Ex parte Wikdahl 10 USPQ 2d 1546, 1548 (BPAI 1989); Ex parte McCullough 7 USPQ 2d 1889, 1891 (BPAI 1988); In re Finsterwalder 168 USPQ 530 (CCPA 1971); In re Casey 152 USPQ 235, 238 (CCPA 1967). Also, "Expressions relating the apparatus to contents thereof during an intended operation are of no significance in determining patentability of the apparatus claim."; Ex parte Thibault, 164 USPQ 666, 667 (Bd. App. 1969). And, "Inclusion of material or article worked upon by a structure being claimed does not impart patentability to the claims."; In re Young, 25 USPQ 69 (CCPA 1935) (as restated in In re Otto, 136 USPQ 458, 459 (CCPA 1963)). And, claims directed to apparatus must be distinguished from the prior art in terms of structure rather than function. In re Danley, 120 USPQ 528, 531 (CCPA 1959). "Apparatus claims cover what a device is, not what a device does." Hewlett-Packard Co. v. Bausch & Lomb Inc., 15 USPQ2d 1525, 1528 (Fed. Cir. 1990).

Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Goto as applied to claim 1 and further in combination with Kinsman (U.S 6, 005,286).

The prior art does not appear to disclose that the material of the frame is copper, however Kinsman teaches the frame made of copper.

However examiner takes official notice that it would have been obvious to one of ordinary skill in the art at the time the invention was made to form the lead frame of copper in order to provide, as was conventional, an external electrical contact for the device as shown by Kinsman (Column 1, Lines 29-30).

With respect to claim 11, although the prior art does not appear to explicitly teach the process limitations of "an etching process," the product of prior art inherently possesses the structural characteristics imparted by the process limitation. See *In re Fitzgerald, Sanders, and Bagheri*, 205 USPQ 594 (CCPA 1980).

### ***Response to Arguments***

Applicant's arguments filed November 15, 2002 have been fully considered but they are not persuasive. Applicant contends that the present invention differs from Goto in that every terminal in the front row does not connect to the connection bar but at a corner thereof. The broad claim as set forth does not preclude every terminal connected to a connection bar. Furthermore every terminal connected to a connection bar is encompassed by the claim limitation that inner terminals are connected to outer terminals at a corner of the connection bar, since the connection bar provides conductivity throughout the bar including at corners. Lastly, because applicant did not traverse the well known statement made by examiner in the office action filed October 7, 2002, the well known use of copper in leadframes is taken to be acknowledged.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mitchell whose telephone number is (703) 305-0244. The examiner can normally be reached on M-F 10:30-8:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David L. Talbott can be reached on (703) 305-9883. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3432 for regular communications and (703) 305-3230 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

jmm  
January 27, 2003



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